

Be-run



PCT

## RAW SEQUENCE LISTING

DATE: 03/14/2002

PATENT APPLICATION: US/09/869,446

TIME: 11:18:17

Input Set : N:\Crf3\Refhold\I869446.raw

Output Set: N:\CRF3\03142002\I869446.raw

C--> 1 <110> APPLICANT: UNIVERSITY OF GEORGIA RESEARCH FOUNDATION, INC.  
 2 Przybyla, Alan  
 3 Menon, Nanda  
 4 <120> TITLE OF INVENTION: RUBREDOXIN FUSION PROTEINS, PROTEIN EXPRESSION SYSTEM  
 5 AND METHODS  
 6 <130> FILE REFERENCE: 235.00040201  
 7 <140> CURRENT APPLICATION NUMBER: US/09/869,446  
 8 <141> CURRENT FILING DATE: 2002-03-14  
 9 <150> PRIOR APPLICATION NUMBER: 60/114,034  
 10 <151> PRIOR FILING DATE: 1998-12-29  
 11 <160> NUMBER OF SEQ ID NOS: 14  
 12 <170> SOFTWARE: PatentIn Ver. 2.0  
 14 <210> SEQ ID NO: 1  
 15 <211> LENGTH: 276  
 16 <212> TYPE: DNA  
 17 <213> ORGANISM: Artificial Sequence  
 18 <220> FEATURE:  
 19 <223> OTHER INFORMATION: Description of Artificial Sequence: portion of  
 20 prUBEX  
 21 <400> SEQUENCE: 1  
 22 catatgaaaa agtacgtatg caccgtctgc ggttacgaat acgaccctgc tgaaggcgac 60  
 23 cccgacaacg gcgtgaagcc cggcacctcg ttcgacgacc tgccggccga ctgggtatgc 120  
 24 cccgtgtgcg gcgcccccaa gagcgaattc gaagccgcca tgcattggcg atccgaattc 180  
 25 gagaaccatc atcatcatca tcacaacgac tacaaggacg acgatgacaa ggatctgcag 240  
 26 agatcttcgg gtacccgcaa gcttgcggcc gcactc 276  
 28 <210> SEQ ID NO: 2  
 29 <211> LENGTH: 76  
 30 <212> TYPE: PRT  
 31 <213> ORGANISM: Artificial Sequence  
 32 <220> FEATURE:  
 33 <223> OTHER INFORMATION: Description of Artificial Sequence: modified  
 34 rubredoxin including affinity tag, flag peptide  
 35 and enterokinase site  
 36 <400> SEQUENCE: 2  
 37 Met Lys Lys Tyr Val Cys Thr Val Cys Gly Tyr Glu Tyr Asp Pro Ala  
 38 1 5 10 15  
 39 Glu Gly Asp Pro Asp Asn Gly Val Lys Pro Gly Thr Ser Phe Asp Asp  
 40 20 25 30  
 41 Leu Pro Ala Asp Trp Val Cys Pro Val Cys Gly Ala Pro Lys Ser Glu  
 42 35 40 45  
 43 Phe Glu Ala Ala Met His Gly Gly Ser Glu Phe Glu Asn His His His  
 44 50 55 60  
 45 His His His Asn Asp Tyr Lys Asp Asp Asp Asp Lys

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46          65          70          75
48 <210> SEQ ID NO: 3
49 <211> LENGTH: 52
50 <212> TYPE: PRT
51 <213> ORGANISM: Desulfovibrio vulgaris
52 <400> SEQUENCE: 3
53      Met Lys Lys Tyr Val Cys Thr Val Cys Gly Tyr Glu Tyr Asp Pro Ala
54          1          5          10          15
55      Glu Gly Asp Pro Asp Asn Gly Val Lys Pro Gly Thr Ser Phe Asp Asp
56          20          25          30
57      Leu Pro Ala Asp Trp Val Cys Pro Val Cys Gly Ala Pro Lys Ser Glu
58          35          40          45
59      Phe Glu Ala Ala
60          50
62 <210> SEQ ID NO: 4
63 <211> LENGTH: 6
64 <212> TYPE: PRT
65 <213> ORGANISM: Artificial Sequence
66 <220> FEATURE:
67 <223> OTHER INFORMATION: Description of Artificial Sequence: affinity tag
68 <400> SEQUENCE: 4
69      His His His His His His
70          1          5
72 <210> SEQ ID NO: 5
73 <211> LENGTH: 8
74 <212> TYPE: PRT
75 <213> ORGANISM: Artificial Sequence
76 <220> FEATURE:
77 <223> OTHER INFORMATION: Description of Artificial Sequence: Flag peptide
78 <400> SEQUENCE: 5
79      Asp Tyr Lys Asp Asp Asp Asp Lys
80          1          5
82 <210> SEQ ID NO: 6
83 <211> LENGTH: 5
84 <212> TYPE: PRT
85 <213> ORGANISM: Artificial Sequence
86 <220> FEATURE:
87 <223> OTHER INFORMATION: Description of Artificial Sequence: enterokinase
88      site
89 <400> SEQUENCE: 6
90      Asp Asp Asp Asp Lys
91          1          5
93 <210> SEQ ID NO: 7
94 <211> LENGTH: 4
95 <212> TYPE: PRT
96 <213> ORGANISM: Artificial Sequence
97 <220> FEATURE:
98 <223> OTHER INFORMATION: Description of Artificial Sequence: affinity tag
99 <400> SEQUENCE: 7

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100      His Gly Leu His
101          1
103 <210> SEQ ID NO: 8
104 <211> LENGTH: 381
105 <212> TYPE: DNA
106 <213> ORGANISM: Artificial Sequence
107 <220> FEATURE:
108 <223> OTHER INFORMATION: Description of Artificial Sequence: A 1-42
109      rubredoxin fusion construct
110 <400> SEQUENCE: 8
111      atgaaaaagt acgtatgcac cgtctgcggt tacgaatacg accctgctga aggcgacccc 60
112      gacaacggcg tgaagcccgg cacctcgttc gacgacctgc cggccgactt gggatatgcc 120
113      cgtgtgcggc gcccccaaga gcaaatcga agccgccatg catggcggat ccgaattcga 180
114      gaaccatcat catcatcatc acaacgacta caaggacgac gatgacgacg atgacaagga 240
115      tctgatcgaa ggctgtgatg cagaattccg acatgactca ggatatgaag ttcatcatca 300
116      aaaattggtg ttctttgcag aagatgtggg ttcaaacaaa ggtgcaatca ttggactcat 360
117      ggtgggcggt gttgtcatag c                                     381
119 <210> SEQ ID NO: 9
120 <211> LENGTH: 124
121 <212> TYPE: PRT
122 <213> ORGANISM: Artificial Sequence
123 <220> FEATURE:
124 <223> OTHER INFORMATION: Description of Artificial Sequence: A 1-42
125      rubredoxin fusion protein
126 <400> SEQUENCE: 9
127      Met Lys Lys Tyr Val Cys Thr Val Cys Gly Tyr Glu Tyr Asp Pro Ala
128          1              5              10              15
129      Glu Gly Asp Pro Asp Asn Gly Val Lys Pro Gly Thr Ser Phe Asp Asp
130          20              25              30
131      Leu Pro Ala Asp Trp Val Cys Pro Val Cys Gly Ala Pro Lys Ser Glu
132          35              40              45
133      Phe Glu Ala Ala Met His Gly Gly Ser Glu Phe Glu Asn His His His
134          50              55              60
135      His His His Asn Asp Tyr Lys Asp Asp Asp Asp Lys Asp Leu Ile Glu
136          65              70              75              80
137      Gly Arg Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His
138          85              90              95
139      Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala
140          100             105             110
141      Ile Ile Gly Leu Met Val Gly Gly Val Val Ile Ala
142          115             120
144 <210> SEQ ID NO: 10
145 <211> LENGTH: 42
146 <212> TYPE: PRT
147 <213> ORGANISM: Artificial Sequence
148 <220> FEATURE:
149 <223> OTHER INFORMATION: Description of Artificial Sequence: A 1-42
150      peptide
151 <400> SEQUENCE: 10

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152      Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
153          1              5              10              15
154      Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
155          20              25              30
156      Gly Leu Met Val Gly Gly Val Val Ile Ala
157          35              40
159 <210> SEQ ID NO: 11
160 <211> LENGTH: 4
161 <212> TYPE: PRT
162 <213> ORGANISM: Artificial Sequence
163 <220> FEATURE:
164 <223> OTHER INFORMATION: Description of Artificial Sequence: Factor Xa
165      restriction site
166 <400> SEQUENCE: 11
167      Ile Glu Gly Arg
168          1
170 <210> SEQ ID NO: 12
171 <211> LENGTH: 30
172 <212> TYPE: PRT
173 <213> ORGANISM: Artificial Sequence
174 <220> FEATURE:
175 <223> OTHER INFORMATION: Description of Artificial Sequence: intervening
176      spacer region
177 <400> SEQUENCE: 12
178      Met His Gly Gly Ser Glu Phe Glu Asn His His His His His His Asn
179          1              5              10              15
180      Asp Tyr Lys Asp Asp Asp Asp Lys Asp Leu Ile Glu Gly Arg
181          20              25              30
183 <210> SEQ ID NO: 13
184 <211> LENGTH: 7
185 <212> TYPE: PRT
186 <213> ORGANISM: Artificial Sequence
187 <220> FEATURE:
188 <223> OTHER INFORMATION: Description of Artificial Sequence: Flag peptide
189 <400> SEQUENCE: 13
190      Tyr Lys Asp Asp Asp Asp Lys
191          1              5
193 <210> SEQ ID NO: 14
194 <211> LENGTH: 40
195 <212> TYPE: PRT
196 <213> ORGANISM: Artificial Sequence
197 <220> FEATURE:
198 <223> OTHER INFORMATION: Description of Artificial Sequence: A 1-40
199      peptide
200 <400> SEQUENCE: 14
201      Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
202          1              5              10              15
203      Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
204          20              25              30

```

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205	Gly	Leu	Met	Val	Gly	Gly	Val	Val
206			35				40	

VERIFICATION SUMMARY

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L:8 M:271 C: Current Filing Date differs, Replaced Current Filing Date